

## Abstract

5           An interactive display system includes an electronic camera which intermittently records a participant's image and digitally inputs the video image into a computer, creating a digitized "virtual user image". The camera is positioned behind a large viewing screen which faces the user and records the user's image through an opening provided within the screen. The computer further receives a text string having a fall rate value. For each digital image received  
10 by the camera, a software program determines the destination of each line of text according to its fall rate, and then uses pixel color comparison techniques to determine if a "virtual obstacle" is located at the particular destination. If not, the text is displayed at the destination so that the text appears to "fall" on the screen. If a virtual obstacle is present, a new higher destination is determined until the virtual obstacle is no longer detected. This arrangement causes the falling text displayed on the screen to be selectively "caught" by the user and otherwise manipulated in  
15 the virtual environment.